

REMARKS

Claims 1-3, 5 and 16-56 are cancelled; claim 4 is amended; and claims 4 and 6-15 are pending in the application.

The Examiner rejects claims 4 and 6-15 for obviousness-type double patenting relative to claims of co-pending application number 10/817,704. The Examiner is respectfully reminded that under the authority of M.P.E.P. §804.01 and 35 U.S.C. §121, it is inappropriate for the Patent Office to issue a double patenting rejection between two applications when the Office previously made a requirement for restriction between the claims of such applications.

In the present case, this application (U.S. application serial no. 10/817,175) and the application that the Examiner uses in the obviousness-type double patenting rejection (U.S. application no. 10/817,704) both were filed as divisional applications due to a restriction mailed by the Patent Office on May 7, 2003 and pertaining to the grandparent application (U.S. application serial no. 09/989,931). Such restriction stated that the originally-filed claims had five separate species. Applicant argued (in a response filed May 16, 2003 for application serial no. 09/989,931) that there were generic claims, and the Patent Office responded with an Action on August 5, 2003 withdrawing claims 2, 4 and 5 from further consideration. Accordingly, the Office indicated that claims 2, 4 and 5 were not covered by generic claims of the originally-filed application. Applicant then filed this divisional application (U.S. application serial no. 10/817,175) to pursue the subject matter of

originally-filed claim 4; and filed the related application (U.S. application serial no. 10/817,704) to pursue the subject matter of the originally-filed claim 2.

Since the Patent Office previously contended that originally-filed claims 2 and 4 pertained to separate inventions relative to one another, it is inappropriate for the Patent Office to now contend that there can be obviousness-type double patenting between the present case pursuing originally-filed claim 4 as the only independent claim and the application serial no. 10/817,704 which pursues originally-filed claim 2 as the only independent claim.

For the reasons discussed above, the obviousness-type double patenting rejection is inappropriate, and Applicant therefore requests withdrawal of such rejection in the Examiner's next action.

The pending claims of the application stand further rejected as being unpatentable over Furukawa, Nakai, Shimbo and Imai, in various combinations. Applicant respectfully requests reconsideration of such rejections.

Referring first to independent claim 4, such recites a method of forming semiconductor circuitry in which a substrate is provided which comprises a bulk monocrystalline silicon structure, an insulative material over the bulk monocrystalline silicon structure, and a monocrystalline silicon mass over the insulative material. The claim further recites that a mask is formed which covers a first portion of substrate and leaves a second portion uncovered, and that a recess is formed in the uncovered portion. Such recess is recited to be formed through the monocrystalline mass and to the insulative

material, but to not extend entirely through the insulative material. Additionally, the claim recites that the recess is at least partially filled with a semiconductor material that comprises at least 1 atomic% of an element other than silicon, the mask is removed, a first semiconductor circuit component is formed over the first portion of the substrate, and a second semiconductor circuit component is formed over the semiconductor material that at least partially fills the recess.

The amendment to claim 4 is supported by the originally-filed application at, for example, Fig. 3 and paragraph 0028, and therefore does not comprise "new matter".

Claim 4 is believed allowable over the cited references for at least the reason that the references do not suggest or disclose all of the recited features of claim 4. For instance, there is no suggestion or disclosure within the cited references of the claim 4 recited formation of a recess which extends through a recited monocrystalline silicon mask and to an insulative material but not entirely through the insulative material, in combination with the other recited features of claim 4.

Applicant notes that the only reference cited by the Examiner for showing a recess formed within a structure comprising bulk monocrystalline silicon, insulative material over the bulk monocrystalline silicon, and a monocrystalline silicon mask over the insulative material, is Furukawa. However, Applicant also notes that Furukawa specifically discloses that the described recess extends entirely through the shown insulative material (with the recess being shown as an opening 10 in Fig. 3, and the insulative material corresponding to a material 16). The recess of Furukawa reaches the underlying bulk monocrystalline

material so that a semiconductor material can subsequently epitaxially grown from the bulk monocrystalline material (see, for example, col. 4, lines 34-39 of Furukawa), and accordingly it would defeat the intended purpose of Furukawa if the trench of Furukawa did not extend entirely through the insulative material to reach the bulk monocrystalline material. Thus, it is inconceivable that Furukawa could disclose or suggest the claim 4 recited method in which a recess is formed through a recited monocrystalline silicon mask and to an insulative material, but does not extend entirely through the insulative material. The Examiner's cited references do not, in any combination, suggest that a recess of the type shown in Furukawa could be formed to extend to an insulative material but not entirely through the insulative material, and in fact it is inconceivable that such teaching could be found amongst any references in that such teaching would render the recess of Furukawa inoperable for the very purpose for which Furukawa is forming it (notably, to epitaxially grow semiconductor material from an underlying bulk monocrystalline material). Accordingly, there is no teaching or suggestion within the Examiner's cited references of the claim 4 recited method. Applicant therefore requests formal allowance of amended claim 4 in the Examiner's next action.

Claims 6-15 depend from claim 4, and are therefore allowable for at least the reasons discussed above regarding claim 4.

Claims 4 and 6-15 are allowable for the reasons discussed above and Applicant therefore requests formal allowance of such claims in the Examiner's next action.

Respectfully submitted,

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